

*"If you know subwoofers, you know about Velodyne."*

*"... it's safe to say that when it comes to woofin' done right, Velodyne's bigger models are probably the safest bet there is."*

*"... we just sat there marvelling at the sheer power and majesty of this junior varsity Velodyne."*

*-Corey Greenberg*

*Home Theater Technology/February 1995*

*Face Off: Comparison of five subwoofers*

*Model Tested: VA-1012X*

*"...Velodynes VA-1215X is a great subwoofer. It combines deep, loud, high-quality output with a slick styling, a fairly small cabinet, full flexibility, it's sure to stand tall next to the very best of its peers."*

*-Tom Nousaine*

*Video/October 1995*

*Model Tested: VA-1215X*

# VA1250X

## Owner's Manual



**Velodyne Acoustics, Inc.**  
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# Velodyne®

Audio/Video Subwoofer System



*Printed on recycled paper.*

Date: \_\_\_\_\_

Model# \_\_\_\_\_

Installed by: \_\_\_\_\_ Phone: \_\_\_\_\_

Volume Setting: \_\_\_\_\_ Output Level (dB): \_\_\_\_\_

Low Pass X-Over: \_\_\_\_\_ Hz Phase Position: \_\_\_\_\_ °

High Pass X-Over: 80 Hz \_\_\_\_\_ 100 Hz \_\_\_\_\_

Output Levels: (Speakers)

Left Front: \_\_\_\_\_ dB Right Front: \_\_\_\_\_ dB

Left Rear: \_\_\_\_\_ dB Right Rear: \_\_\_\_\_ dB

Center: \_\_\_\_\_ dB

FOR YOUR RECORDS...

DATE PURCHASED \_\_\_\_\_

DEALER \_\_\_\_\_

SERIAL# \_\_\_\_\_

\*NOTE: Please complete and return your warranty card within ten (10) days.



SPECIFICATIONS	VA-1250X
Cabinet (incl. legs)	18" x 19" x 19" (W,H,D)
Frequency Response	22Hz. - 120Hz +/- 3 dB
High Pass Crossover	80Hz. or 100Hz (6 dB/octave)
Low Pass Crossover	40Hz. - 120Hz (6 dB/octave, 24 dB ultimate)
Amplifier - Class A/B	250 watts, 750 watts peak
Woofer	12" forward firing
Magnet	70 oz.
Voice Coil	2-1/2"
Passive Radiator	15" downward firing
Inputs	Line-level & speaker-level
Outputs	Line-level & speaker-level
Warranty	Two years (parts & labor)
Weight	67 lbs. (approx.)

Specifications are subject to change without notice.

## IMPORTANT SAFETY INSTRUCTIONS



**CAUTION**  
**RISK OF ELECTRIC SHOCK**  
**DO NOT OPEN**



**Caution:** To reduce the risk of electric shock, do not remove cover (or back). No user-serviceable parts inside. Refer servicing to qualified service personnel.

The lightning flash with arrowhead symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the subwoofer.

1. Read Instructions -- All safety and operating instructions should be read before the subwoofer is operated.
2. Retain Instructions -- The safety and operating instructions should be retained for future reference.
3. Heed Warnings -- All warnings on the subwoofer and in the operating instructions should be adhered to.
4. Follow Instructions -- All operating and use instructions should be followed.
5. Water and Moisture -- The subwoofer should not be used near water -- for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, near a swimming pool or the like.
6. Carts and Stands -- The subwoofer should be used only with a cart or stand recommended by the manufacturer.
7. Wall or Ceiling Mounting -- The subwoofer should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. Ventilation -- The subwoofer should be situated so that its location or position does not interfere with its proper ventilation. For example, the subwoofer should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or placed in a built-in installation such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
9. Heat -- The subwoofer should be situated away from heat sources such as radiators, heat registers, stoves, or other subwoofers that produce heat.
10. Power Sources -- The subwoofer should be connected to a power supply only of the type described in the operating instructions or as marked on the subwoofer.
11. Power-Cord Protection -- Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point at which they exit from the subwoofer.
12. Caution: To prevent electrical shock, match wide blade of plug to wide slot, fully inserted.
13. Cleaning -- The subwoofer should be cleaned only as recommended by the manufacturer.
14. Nonuse Periods -- The power cord of the subwoofer should be unplugged from the outlet when left unused for a long period of time.
15. Object and Liquid Entry -- Care should be taken so that objects do not fall and liquids are not spilled onto the enclosure.
16. Damage Requiring Service -- The subwoofer should be serviced by qualified service personnel when:
  - a. The power-supply cord or plug has been damaged.
  - b. Objects have fallen or liquid has been spilled into the subwoofer.
  - c. The subwoofer has been exposed to rain.
  - d. The subwoofer does not appear to operate normally or exhibits a marked change in performance.
  - e. The subwoofer has been dropped or damaged.
17. Servicing -- The user should not attempt to service the subwoofer beyond what is described in the operating instructions.
18. Overloading - Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.
19. Replacement parts - When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
20. Safety Check - Upon completion of any service or service of repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

All other servicing should be referred to qualified service personnel.

# WICHTIGE SICHERHEITSHINWEISE



**Vorsicht:** Zur Vermeidung von Gefahr durch elektrischen Schlag, Deckel (oder Rückwand) nicht abnehmen. Produkt enthält keine Anwenderteile. Reparatur und Wartung nur von qualifiziertem Fachpersonal vornehmen lassen.

Das Blitzsymbol dient als Hinweis auf unisolierte „gefährliche Spannungen“ innerhalb des Gehäuses, deren Werte eine Berührungsgefahr für den Menschen darstellen können.

Das Symbol mit dem Ausrufungszeichen dient als Hinweis auf wichtige, in den Unterlagen des Subwoofers enthaltene Bedienungs- und Wartungsvorschriften.

1. Anleitungen lesen - Alle Sicherheits- und Bedienungsanleitungen vor Inbetriebnahme des Subwoofers aufmerksam durchlesen.
2. Anleitungen aufzubewahren - Die Sicherheits- und Bedienungsanleitungen zur späteren Bezugnahme aufzubewahren.
3. Warnungen beachten - Alle Warnungen am Subwoofer und in der Bedienungsanleitung unbedingt beachten.
4. Anleitungen befolgen - Alle Bedienungs- und Gebrauchsanleitungen genau befolgen.
5. Wasser und Feuchtigkeit - Subwoofer nicht in der Nähe von Wasser aufstellen, d.h. neben einer Badewanne, Spüle, Waschmaschine, in einem feuchten Keller, in der Nähe des Swimmingpools o.ä..
6. Rollwagen und Ständer - Subwoofer nur mit einem vom Hersteller empfohlenen Rollwagen oder Ständer benutzen.
7. Wand- oder Deckenbefestigung - Subwoofer nur den Herstellerempfehlungen gemäß an der Wand oder Decke befestigen.
8. Belüftung - Subwoofer so aufstellen, daß die erforderliche Belüftung nicht behindert wird. D.h., Subwoofer nicht auf einer weichen Oberfläche wie einem Bett, Sofa, Teppich o.ä. aufstellen, die die Belüftungsoffnungen blockieren kann. Subwoofer gleichfalls nicht in einem Regal oder Schrank unterbringen, worin die Luftzufuhr behindert wird.
9. Wärme - Subwoofer nicht in der Nähe von Wärmequellen, wie Heizkörpern, Wärmespeichern, Öfen oder anderen wärmeerzeugenden Subwoofern aufstellen.
10. Netzanschluß - Subwoofer nur an eine der in der Bedienungsanleitung beschriebenen oder auf dem Subwoofer angegebenen Stromquellen anschließen.
11. Netzkabelschutz - Netzkabel so verlegen, daß nicht daraufgetreten wird oder sie durch darauf-oder dagegengestellte Gegenstände eingeklemmt werden können. Die Anschlußstellen des Netzkabels an Steckdosen und am Subwoofer dabei besonders beachten.
12. „Vorsicht“: Zur Vermeidung von Gefahr durch elektrischen Schlag sicherstellen, daß der Schutzkontakt des Steckers vollständig in die Steckdose eingeführt ist.
13. Reinigung - Subwoofer nur den Herstellerempfehlungen gemäß reinigen.
14. Betriebsfreie Zeiträume - Netzkabel des Subwoofers aus der Steckdose ziehen, wenn er über einen längeren Zeitraum nicht benutzt wird.
15. Beschädigungen durch Gegenstände oder Flüssigkeiten - Es ist darauf zu achten, daß keine Gegenstände auf das Gehäuse fallen oder Flüssigkeiten darauf verschüttet werden.
16. Beschädigungen, die eine Reparatur erforderlich machen - Subwoofer sollte von qualifiziertem Fachpersonal repariert werden, wenn:
  - a. Das Netzkabel oder der Stecker beschädigt sind.
  - b. Gegenstände oder Flüssigkeiten in den Subwoofer gelangt sind.
  - c. Der Subwoofer dem Regen ausgesetzt wurde.
  - d. Der Betrieb des Subwoofers gestört ist oder seine Leistung deutlich nachgelassen hat.
  - e. Der Subwoofer fallengelassen oder beschädigt wurde.
17. Reparatur und Wartung - Durch den Benutzer auszuführende Wartungsmaßnahmen des Subwoofers sind auf die in der Bedienungsanleitung angegebenen Prozeduren beschränkt.
18. Überlastung - Zur Vermeidung von Brandgefahr und elektrischem Schlag Wandsteckdosen, Verlängerungskabel bzw. eingebaute Steckdosen nicht überlasten.
19. Ersatzteile - Wenn Ersatzteile benötigt werden, sicherstellen, daß der Servicetechniker entweder die vom Hersteller angegebenen Ersatzteile benutzt oder Teile, die den Originalteilen entsprechende Kennwerte besitzen. Die Verwendung von Ersatzteilen, die nicht zugelassen sind, kann Brände, elektrischen Schlag oder andere Gefahren verursachen.
20. Sicherheitsprüfung - Nach Beendigung von Wartungs- oder Reparaturmaßnahmen an diesem Produkt vom Servicetechniker Sicherheitsprüfungen zum Nachweis des ordnungsgemäßen Betriebszustandes vornehmen lassen.

Alle anderweitigen Servicemaßnahmen von qualifiziertem Wartungspersonal durchführen lassen.

## Troubleshooting & Service

Before seeking service for your VA-1250X subwoofer, please re-check all systems. Following is a simple troubleshooting guide to assist you.

1. Verify unit is plugged in and power outlet used is active.
2. Is power switch on?
3. Is auto turn on/off set properly?
4. Is unit receiving an input signal from your source?
5. Have all controls on subwoofer (volume, crossover, phase, etc.) been properly set?
6. If unit has been running at high levels, one of the protection circuits may be engaged.
  - Has the built-in amplifier overheated?
  - Has the speaker's voice coil started to heat up?

If the protection circuitry is active, the unit may cycle on and off until operating parameters return to normal. Under more serious conditions, the unit may shut off completely. Normal operation will return upon cooling, but you may be required to turn the power off and then on again to reset the unit.

The following conditions require service by a qualified technician:

1. The power cord has become damaged.
2. The unit does not appear to operate normally or exhibits a marked change in performance.
3. The unit has been exposed to water.
4. Some part of the cabinet or circuitry is physically damaged.

**Thank you for purchasing a Velodyne!**



# IMPORTANTES CONSIGNES DE SECURITE



**Attention:** Afin d'éviter tout risque d'électrocution, ne pas enlever le boîtier (ou partie arrière de l'enceinte). Aucune pièce ne doit être manipulée par l'utilisateur. Pour tout entretien, vous référer à un personnel de service qualifié.

Le symbole de l'éclair avec la flèche sert à avertir l'utilisateur de la présence d'un "voltage dangereux" non isolé dans l'enceinte du produit d'une magnitude pouvant constituer un risque d'électrocution de personnes.

Le symbole du point d'exclamation sert à avertir l'utilisateur que d'importants conseils de fonctionnement et de maintenance (entretien) sont fournis avec l'enceinte d'extrêmes graves.

1. Lire le mode d'emploi - Tous les conseils de sécurité et de fonctionnement doivent être lus avant de mettre en marche l'enceinte.
2. Garder le mode d'emploi - Il est conseillé de conserver les conseils de sécurité et de fonctionnement pour un éventuel usage futur.
3. Avertissements - Il est important de se conformer à tous les conseils de fonctionnement concernant l'enceinte et à toutes les instructions inscrites sur l'enceinte.
4. Suivre les conseils - Tous les conseils d'utilisation et de fonctionnement doivent être suivis à la règle.
5. Eau et humidité - Ne pas utiliser l'enceinte près d'une source d'eau - par exemple, près de la baignoire, d'une bassine de lavage, d'un évier de cuisine, d'un bac à lavage, dans un sous-seul mouillé, près d'une piscine...
6. Pieds et Supports - N'utiliser que des pieds et supports recommandés par le fabricant.
7. Assemblage mural ou au plafond - Se conformer uniquement aux instructions du fabricant pour fixer l'enceinte sur un mur ou sur un plafond.
8. Ventilation - Il est important de placer l'enceinte de telle sorte qu'elle ne gêne pas sa propre ventilation. Par exemple, ne pas placer l'enceinte sur un lit, un canapé, sur la moquette, ou sur toute surface similaire qui bloque les ouvertures de ventilation ; ne pas poser l'enceinte dans une meuble encastré ou fermé telle qu'une bibliothèque ou un meuble qui empêche l'air de circuler par les ouvertures de ventilation de l'enceinte.
9. Chaleur - Placer l'enceinte loin de toute source de chaleur tels que radiateurs, compteurs thermiques, fours ou autres enceintes dégagant de la chaleur.
10. Sources d'électricité - Ne brancher l'enceinte que dans une prise du type décrit dans le mode d'emploi ou comme indiqué par le fabricant.
11. Protection du cordon électrique - Les cordons électriques doivent être fixés pour éviter que toute personne ne marche dessus et que rien ne puisse être placé sur ou contre eux - faire tout particulièrement attention aux cordons branchés dans des prises électriques, à des réceptacles et à leurs points de sorties de l'enceinte.
12. "Attention : Afin d'éviter tout choc électrique, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond".
13. Nettoyage - Pour le nettoyage de l'enceinte, suivre scrupuleusement les instructions du fabricant.
14. Périodes de non-utilisation - Le cordon électrique de l'enceinte doit rester débranché si l'enceinte reste inutilisée pendant une longue période de temps.
15. Infiltration d'objet ou de liquide - Faire attention à ce qu'aucun objet ne tombe et à ce qu'aucun liquide ne soit versé sur l'enceinte.
16. Dommages nécessitant réparation - L'enceinte ne doit être réparée que par du personnel qualifié lorsque :
  - a. le cordon électrique ou la prise ont été endommagés.
  - b. Des objets sont tombés ou du liquide a été versé sur l'enceinte.
  - c. L'enceinte a été exposée à la pluie.
  - d. L'enceinte ne semble pas fonctionner normalement ou indique un changement de performance.
  - e. L'enceinte est tombée par terre ou a été endommagée.
17. Entretien - L'utilisateur ne doit pas tenter de réparer l'enceinte au-delà de ce qui est décrit dans le mode d'emploi.
18. Surcharge - Ne pas surcharger les prises murales, les rallonges, ou les prises femelles encastrées de commodité. On risquerait un incendie ou un choc électrique.
19. Pièces de rechange - Lorsque le remplacement d'une pièce s'avère nécessaire, s'assurer que le technicien utilise la pièce spécifiée par le fabricant, ou une pièce possédant les mêmes caractéristiques que la pièce d'origine. Les substitutions non autorisées peuvent provoquer des incendies ou des chocs électriques, ou présenter d'autres dangers.
20. Contrôle de sécurité - Après toute intervention technique sur ce produit (neuf ou réparé), demander au technicien de procéder à un contrôle de sécurité pour vérifier qu'il est en bon état de marche.

Toute autre réparation doit être référée à du personnel qualifié.

When using a pair of subwoofers in stereo, it is preferable to place each subwoofer adjacent to the satellite of the same channel. Keep in mind that frequency response and output level can be drastically influenced by placement depending on the acoustic properties of the listening room. Typically the subwoofer will sound louder when placed next to a wall or in a corner.

## Caution!

*The VA series subwoofers have amplifiers built into the cabinet. Do not place the cabinet next to sources of heat such as furnace registers, radiators, etc. The power cord should be routed in such a way that it will not be walked on, pinched, or compressed in any way. For best sound, keep the subwoofer in an upright position, with the passive radiator facing downward.*

The subwoofer is magnetically shielded to reduce magnetic emission from its cabinet to increase the number of possible locations available for placement. However, this shielding may not be adequate for all installations. Certain types of televisions are particularly sensitive to stray magnetic fields. If your television produces distorted colors after installation of your subwoofer, simply increase the distance between your television and the VA-1250X until normal color and operation is returned.

## Care of your subwoofer

Do not use any harsh detergents or chemicals to clean the cabinet. Abrasives, detergents, or cleaning solutions may damage the finish on the cabinet. We recommend using a damp cloth to clean the cabinet.

During normal conditions, the subwoofer may be left on continuously without any problems. The unit is equipped with a signal-sensing turn on/off that will automatically turn on the unit when a signal is present at the inputs and turn off the unit after several minutes when there is no longer any signal at the inputs.

If you plan to leave the unused for an extended period of time, we recommend that you turn off the unit by the master power switch on the rear panel.

continued...



# Congratulations!

Congratulations on your purchase of a Velodyne VA-1250X subwoofer system. This system represents the state of the art in accurate low frequency reproduction. Read and follow the instructions below to insure safe and proper system operation.

## Warning!

*To prevent fire or shock hazard, do not expose this equipment to rain or moisture. To avoid electrical shock, do not open speaker enclosure or amp chassis cover. Please observe all warnings on the equipment itself. There are no user serviceable parts inside. Please refer all service questions to your authorized Velodyne dealer.*

## Prior to installation

Please unpack the system carefully. Remove all staples used to seal the carton as they can scratch the cabinet. Please save the carton and all packaging materials for future use. Record the serial number in the space provided on the warranty card for future reference.

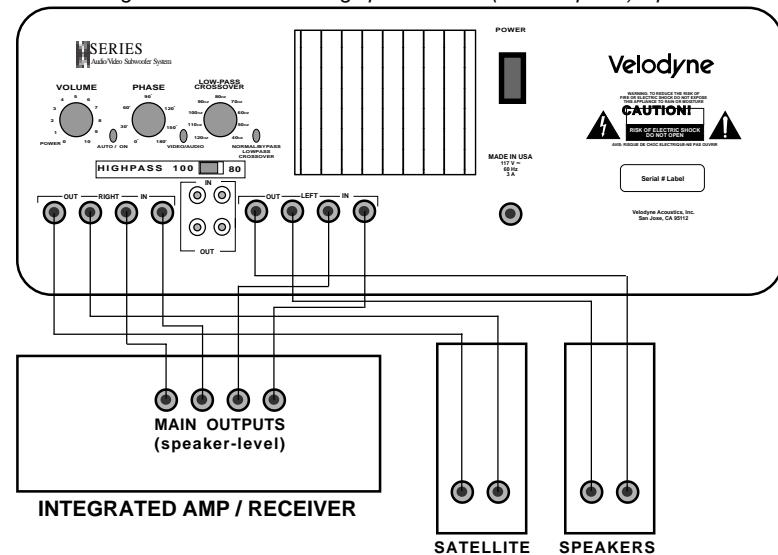
## Product Features & Controls

- 12" forward firing woofer with 2-1/2" voice coil & 70 oz. magnet
- 15" downward firing passive radiator
- Built-in 250 watt (RMS) power amplifier
- Adjustable (40 to 120Hz) low-pass crossover with bypass option
- Selectable (80 or 100Hz) high-pass crossover
- Line-level inputs & outputs
- Speaker-level inputs & outputs with 5 way binding posts
- Signal sensing auto turn on/off with bypass option
- Variable volume control
- Variable phase control (0 to 180 degrees)
- Two position audio/video listening selection switch (+3dB, video)
- Response, 22 Hz to 120 Hz, +/- 3dB
- Magnetically shielded for video use
- Dual staggered low-pass crossover; 12dB/octave initial, 24dB/octave ultimate
- Gain compression circuit to protect woofer from over excursion
- Input overload protection
- Thermal power sensing to protect woofer's voice coil from burnout
- Power on LED (green)

*continued...*



Figure 2: Installation using speaker-level (from amplifier) inputs



## Interconnect cables

When installing your VA-1250X using the line-level inputs/outputs, you should use standard shielded phono cables. Always keep the lines as short as practical to minimize noise.

When using the speaker-level inputs/outputs, use the same quality speaker cable to your subwoofer as you run to your satellites.

## Placement

The VA-1250X operates at very low frequencies which are primarily omni-directional. While it is recommended that the subwoofer be placed on the same plane as the satellite speakers, room and system conditions often dictate otherwise. Ask your dealer for help in placement.



output and increased noise. In these cases, to optimize your subwoofer performance you should bypass the internal crossover in your *Velodyne* subwoofer.

To bypass the crossover within the subwoofer, simply locate the switch marked "normal/bypass" on the back panel of the subwoofer and set to the "bypass" position. This will eliminate the internal crossover function.

#### **Note**

If not using an external crossover, you should use the built-in crossover for optimal performance.

## **Subwoofer out from A/V Processor**

From the low pass output of your signal processor install into right or left RCA line in connector in the back of the subwoofer or use a "Y" connector adapter into both right and left RCA line in connectors in the back of the subwoofer.

## **Speaker-level connection**

Figure 2 shows an easy way to connect your VA-1250X subwoofer directly to your receiver or integrated amplifier.

When connected in this fashion, your satellite speakers will be crossed over at 80/100Hz, which removes the lower bass from your speakers thus, enabling them to do a better job reproducing high frequencies.

You may also connect your satellites directly to your receiver or amplifier along with the subwoofer if you wish to bypass the internal high-pass crossover.

#### **Caution!**

*To avoid damage to your main amplifier, be sure to maintain correct polarity when making all connections. Red (positive) to red, and black (negative) to black. Be sure that all connections are tight, and that there are no loose strands or frayed wires.*

*continued...*



## **Installation**

Your new VA-1250X subwoofer system provides for a number of installation options. Read all the installation information below in order to determine which installation option is best for your system. **Remember to perform all installation procedures with system power turned off.**

#### **Inputs**

Your new subwoofer is equipped with both speaker-level and line-level inputs. Use the LINE-IN jacks when connecting your subwoofer to a pre-amp, signal processor, or subwoofer output/LFE. The FROM AMPLIFIER jacks connect directly to the speaker outputs of an integrated amplifier or receiver. Your amplifier section will notice no additional loading effects when you use these inputs because of their high impedance.

#### **Note**

*Do not use both LINE-IN and FROM AMPLIFIER inputs simultaneously.*

#### **Volume control**

This control allows you to balance the output from the subwoofer to the main speakers in your system. This control should be set to achieve similar volume level from both the main speakers and subwoofer.

#### **Low-pass crossover**

Both sets of inputs sum the left and right channels together and the resulting signal is passed through an adjustable low-pass crossover before being amplified. The crossover control allows you to adjust the upper limit of the subwoofer's frequency response from 40 to 120 Hz. The subwoofer's response will begin rolling off above the frequency you set this control to.

You should set the crossover frequency to obtain a smooth and seamless transition from the subwoofer to the main speakers in your system. If your main speakers are smaller units with limited low frequency output, you may wish to choose a higher frequency (such as 100-120Hz) than you would with larger speakers which have greater low frequency output. With larger speakers, you might start with this control set lower, such as 80Hz.

A bypass switch is also provided if you wish to use an external crossover. If you are not using an external crossover, we recommend that you use the one provided within the unit for optimum performance.

#### Phase adjustment

This control allows you the ability to compensate for having the subwoofer in a different location than the main speakers. Ideally, you will have the sound from the subwoofer reach the listening position the same time as the sound from the main speakers. However, if the distance from the listening position to the subwoofer and the distance from listening position to the main speakers differs, the sound from each will reach your ears at a different time.

This control allows the signal to be delayed up to 180 degrees so the output of the subwoofer will blend in to that of your main speakers without any cancellation.

#### Video/Audio switch

Many listeners prefer an "emphasized" low end on movie soundtracks. This switch sets the VA-1250X for an additional 3dB of output when in video mode.

#### Auto turn on function

With this function in the "auto" position, your subwoofer can be safely left with the main power switch on continuously. The subwoofer will turn itself on automatically when an audio signal is present. If no signal is present for approximately 15 minutes, the unit will switch to standby mode. While in standby mode, your subwoofer will draw very minimal power. This function can be disabled by leaving the switch in the "on" position.

#### High pass crossover switch

This switch selects the frequency for the high pass crossover. This crossover is functional on both line and speaker-level outputs. Smaller speakers with limited low frequency output may prefer the higher 100Hz setting which will reduce the low frequencies sent to them. Larger speakers with greater low frequency output may be able to handle the 80Hz. setting without strain.

#### Power switch

The master power switch is located on the right half of the unit. This rocker style switch is the main on/off for the unit. This switch should be set to position 1 for on (up), 0 for off (down).

continued...



**Detachable power cord** (available on some versions)  
Allows for easy replacement should the original be damaged.

## Line-level connection

Figure 1 shows connection to a pre-amplifier's main outputs and returning them to your amplifier inputs.

When installed in this fashion, your satellite speakers will be crossed over at 80/100Hz which removes the lower bass from your amplifier and speakers, enabling them to do a better job reproducing high frequencies. By utilizing this method, you will have a bi-amplified system, gaining improved power and headroom for your system.

#### A word about subwoofer outputs

The Velodyne subwoofer is designed to operate using the full range audio signal for input when using the built-in crossover. Some surround sound processors/receivers, including the *Dolby AC3* system with there .1 channel outputs, have a "subwoofer out" jack that is already crossed over and designed to be used with a conventional amplifier and speaker. Combining both an external crossover and the one internal to the subwoofer may result in low

Figure 1: Installation using line-level (line in) inputs

